P

Name _____

Practice: For use after Lesson 4.1, Algebra 2 with Trigonometry

Algebra 2 GHP
Unit #9
WS #5

Direct Variation

For each function, determine whether y varies directly as x. If so, give the constant of variation and write the equation.

1.

x	y
2	12
3	18
5	30

2.

x	y
1	3
3	7
5	11

For each function, determine whether y varies directly as x. If so, give the constant of variation.

3. $y = 7x$ _____

4. $y = -2x$ _____

5. $y = 3x + 1$ _____

6. $y = -5x - 2$ _____

7. $2y = 5x$ _____

8. $3y = -7x$ _____

In Exercises 9–10, y varies directly as x.

9. If $y = 5$ when $x = 3$, find y when $x = 6$. _____

10. If $y = 6$ when $x = -1$, find x when $y = 18$. _____

In Exercises 11–12, y varies directly as x^2.

11. If $y = 40$ when $x = 2$, find y when $x = 3$. _____

12. If $y = 49$ when $x = 7$, find x when $y = 36$. _____

Applications

13. Geometry The perimeter of an equilateral triangle varies directly as the length of a side. Write an equation for the direct variation, and find the constant of variation. _____

14. Physics The amount that a spring stretches varies directly as the amount of weight attached. If a spring is stretched 12 cm by a 30-g weight, how much is it stretched by a 20-g weight? _____

MIXED PRACTICE

Solve each proportion.

15. $\frac{12}{15} = \frac{x}{5}$ _____

16. $\frac{4}{x} = \frac{28}{49}$ _____

17. Find the equation of the line which passes through the points $(-2, -4)$ and $(-1, 1)$. _____

18. Solve for h in the following literal equation $A = \frac{1}{2}bh$. _____